

Flying Without A Net: The “Economic Freedom” of Working Canadians in 2000

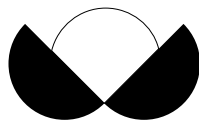
by Amanda Brown and Jim Stanford

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Summary

This study reports on a project to construct a quantitative index summarizing the multi-dimensional economic status of working people in Canada, based on variations in 14 different component indicators of economic and social well-being. The index is termed an index of Economic Freedom for the Rest of Us (or EFRU), to differentiate it from other, more business-oriented attempts to construct quantitative measures of economic “freedom.” These efforts (the most notable being that of the Fraser Institute in Vancouver, B.C.) tend to equate economic freedom with the operation of a “free,” or unregulated, market. Government or institutional intrusions into the operation of unregulated markets are thus seen as undermining economic “freedom”—even if they simultaneously serve to enhance the economic well-being of large numbers of people. Unlike the focus of the Fraser Institute on the “freedoms” of business proprietors and financial investors to earn profits and manage their undertakings in as unconstrained a manner as possible, the EFRU index zeroes in on those key freedoms which must be in place for the rest of the population to economically succeed. In particular, the EFRU index is composed of underlying measures of employment (the freedom to work), average earnings (the freedom to earn income from that work), and the demonstrated degree of economic security and equality (the freedom to live without undue risk of arbitrary dislocation or discrimination).

The study reports EFRU index scores for all ten Canadian provinces on an annual basis from 1990 through 1999. Two types of comparisons are thus of interest. Firstly, EFRU scores fluctuated over time during the 1990s in response both to broader macroeconomic conditions and to shifts in the economic and social policy stance of Canadian governments. From a relatively high level in 1990, EFRU scores in all provinces fell notably during the subsequent recession. Since 1997, however, EFRU scores have recovered strongly thanks to renewed job creation and falling unemployment. In the last two years, the EFRU index has made up over half of the ground it lost between 1990 and its low point, 1997—but it still remains well below its 1990 level.

Despite this good news, trends in the three major component indices of the EFRU highlight a worrisome issue. Virtually all of the improvement in the overall EFRU index since 1997 has been driven by growing employment opportunities, which have boosted the employment sub-index of the EFRU to levels approximately equal to those experienced prior to the re-

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cession. The real earning capacity of Canadian workers remained generally stable throughout the 1990s; the earnings sub-index of the EFRU neither declined much during the recession, nor has it improved much in the subsequent recovery. Meanwhile, however, even as the macroeconomy was finally gathering steam, Canada experienced a notable decline in the demonstrated degree of economic and social equality. This third major sub-index of the EFRU, which attempts to measure the overall equality and security enjoyed by Canadian workers, declined markedly in Canada through the 1990s—a decline which has not been reversed during the latter, more vibrant part of the decade.

The reasons for this deterioration in the broader socio-political climate governing work and incomes in Canada are no secret. Since the bottom of the recession in 1992, Canadian governments at all levels have dramatically cut back their level of support for public spending and social programs. Program spending by all levels of government in Canada has fallen by some 10 percentage points of GDP in the last eight years, from 45 percent of GDP in 1992 to less than 35 percent today. This dramatic and unprecedented retreat from measures aimed at modifying and moderating “free-market” outcomes in labour markets and income distribution is reflected clearly in the significant decline in our overall measure of equality and security—which declined from a pre-recession peak of 104 in 1991, to just 95 by 1997, where it has languished since. Thanks to this decline in the underlying level of social protection, the overall EFRU score for Canadian workers in 1999 still remained well below its pre-recession peak—even though employment and earnings outcomes have now roughly recovered to pre-recession levels. The overall EFRU score for Canada in 1999 reached almost 101—up by over three full points in the past two years, but still more than two points lower than its 1990 level.

The social and economic factors reflected in the equality and security sub-index of the EFRU helped to moderate the negative effects of the recession on the overall economic status of Canadian workers during the tough early part of the past decade. But the subsequent erosion of this network of social security measures means that Canadian workers are more dependent on private labour market outcomes than at any other point in Canada’s recent history. The employment gains that have been enjoyed since 1997 are obviously very welcome to Canadians, weary after nearly a decade of protracted stagnation. But current optimism must be tempered by an awareness that should labour markets turn down again—as they surely must,

sooner or later—Canadian workers will be largely unprotected from the resulting adverse consequences on their employment and earnings capacities. Working Canadians, in short, are flying without a net: the real gains in economic status which have been enjoyed in the past couple of years could prove to be painfully temporary, unless improved market outcomes are once again buttressed through the reconstruction of public and social programs to provide more security and equality than can be expected from the private “free” market.

The EFRU methodology also allows for a second type of comparison to be made, between the demonstrated degrees of economic freedom enjoyed by workers in different Canadian provinces. The comparative ranking of Canadian provinces according to their EFRU scores has shown a startling degree of stability during the 1990s. Neither economic nor political developments have much affected the *relative* performance of the provinces. The top five provinces in this ranking—Ontario, British Columbia, Alberta, Quebec, and Manitoba, respectively—held exactly the same rank at the end of the 1990s as they did at the beginning. Indeed, Ontario and British Columbia retained the number one and two positions, respectively, right through the entire decade. Different high-ranking provinces attained their positions on the basis of different combinations of the three component indices that comprise the overall EFRU. Ontario and Alberta scored highly in the employment category and (especially for Ontario) the earnings category, but were held back by poor scores in the equality and security component (indeed, Alberta ranked tenth out of the provinces on this criteria for every year but 1993, when it was temporarily supplanted by Saskatchewan). British Columbia and Quebec, on the other hand, scored highly in the earnings category, supplemented by moderate scores in the employment and equality/security categories. Not surprisingly, Atlantic Canada—and Newfoundland and Nova Scotia, in particular—fared poorly during the 1990s, experiencing major declines in both their absolute EFRU scores and in their comparative rankings.

The rest of this report provides more details regarding the conception and design of the EFRU methodology, and the evolution of observed EFRU scores both over time and across provinces. Twenty appendix tables provide province-by-province and year-by-year details of both the raw economic and social data considered by the EFRU index, and the scaled EFRU scores derived from that raw data.

"The majestic
egalitarianism of
the law... forbids
rich and poor
alike to sleep
under bridges, to
beg in the streets,
and to steal
bread."
– Anatole
France,
Le Lys Rouge
(1894)

What is Economic Freedom?

Free markets. Free competition. Free trade. Free exchange.

These are the ideologically-loaded buzzwords of conventional, market-oriented economics. The underlying assumption is that the private economy will function in an efficient and mutually beneficial manner, so long as it is allowed to operate free from government regulation, taxation, and other forms of interference. The choice of terms is not accidental: who could be opposed to "free" competition and "free" trade? Indeed, free-market economics has always been closely associated with philosophical liberalism. In this tradition it is hard to imagine being "free" at all, without being able to truck and trade in a free private market.

But when it comes to the economy, "freedom" is a tricky concept. Whether or not one is "free" depends very much on where one fits into the economic pecking order.

All Canadians are equally free to live in a cardboard box under a freeway. Why is it, then, that only the most desperate and poor among us choose to exercise this "freedom"? The freedom to sleep under a freeway is not very relevant to a millionaire. Similarly, the freedom to invest one's financial capital in foreign countries without government restriction is not very relevant to a homeless person. In comparison to fundamental political principles such as the right to hold free elections and the right to freedom of speech, there are fewer absolutes in trying to define what *economic* freedom means.

But this difficulty has not stopped the proponents of conservative economic policies from arguing that their measures will enhance the very freedom of society. The names attached to conservative policies reflect this presumed oneness with greater freedom. The choice of language reflects a common and equally loaded underlying assumption—namely that a "free" market for businesses and investors translates into more freedom for all of us.

For the advocates of conservative economic policies, the free market represents the epitome of economic freedom. Yet bitter economic experience demonstrates clearly that for the propertyless, the free market can be a prison. Countless struggles by generations of working people have attempted to subject market forces to democratic regulation in the interests of equality, fairness, and opportunity: struggles to form unions and bargain over wages and working conditions, efforts to establish social policies which redistribute income and provide minimum economic protections to the poorest members of society, attempts to hold private corporations more

accountable through regulation or taxes to the societies from which they generate their profits. Through the lens of free-market economics, these efforts are intrusive and distortionary. But they nevertheless reflect the desire of masses of people to collectively better their economic prospects, and hence very much represent efforts to extend the principles of freedom and democracy to the economic sphere. Strangely, according to the mindset of a free-market ideologue, a society which decides collectively and democratically to impose limits on the powers of private markets becomes “un-free”; the exercise of political freedom can thus be held to undermine economic freedom.¹

Freedom for Whom?

It was in this hallowed tradition of free-market economics that the Vancouver-based Fraser Institute established an ongoing project several years ago to attempt to measure and monitor the course of “economic freedom” in various jurisdictions around the world.² This project assigns actual numerical scores to different jurisdictions on the basis of various indices of “economic freedom.” The variables considered include: the extent to which the value of financial wealth is protected (through such indicators as low inflation and positive real interest rates); the degree to which government intervenes in the economy through taxes, production, consumption, and economic regulation (such as price controls); and the extent to which international trade and investment relations are free from government interference.

The ideological bias of the Fraser Institute’s approach to economic “freedom” is clear from the choice of variables considered by their index. An economy is “free” if the operations of private businesses and investors are relatively unfettered by government policies, rules, or practices which undermine the flexibility, profitability, or sustainability of those operations. In the Institute’s own words:

The core ingredients of economic freedom are personal choice, protection of private property, and freedom of exchange. Individuals have economic freedom when: (a) their property acquired without the use of force, fraud, or theft is protected from physical invasions by others and (b) they are free to use, exchange, or give their property to another as long as their actions do not violate the identical rights of others.³

The point of economic freedom, in this world view, is to acquire private property, keep it, and use it how one wants to use it.

“All Canadians are equally free to live in a cardboard box under a freeway. Why is it, then, that only the most desperate and poor among us choose to exercise this ‘freedom’?”

But most people in the world do not own economically significant property. They do not own businesses or support themselves from the proceeds of financial wealth. Rather, they must attempt to support themselves through current work activity in an employment relationship—that is, they must get a job. However, key economic policies or regulations which may make it easier or harder for workers to support themselves through work effort are not considered in the Fraser Institute’s ranking. The absence of indicators such as labour and trade union freedoms, employment policy, and social security programs from the Fraser Institute’s index speaks volumes about the one-sided nature of the “freedom” that this project endeavours to quantify.

Since the Fraser Institute’s conception of economic freedom is so narrow, it is not surprising that their index sheds relatively little light on the actual economic conditions experienced by the majority of humanity—those that do not own businesses or significant accumulations of financial wealth. A comparison of the Fraser Institute’s ranking of countries according to “economic freedom,” with the United Nations’ Human Development Index (which ranks countries according to concrete measures of living standards such as income levels, life expectancy, and education) shows no correlation between the two (see Table 1).⁴ The top three countries on the Fraser Institute’s 2000 ranking—Hong Kong, Singapore, and New Zealand—rank no higher than 20th in the United Nations human development scoring for the same year. Alternatively, three of the top ten countries in the U.N. ranking—Norway, Iceland, and Sweden—rank 22nd or lower in the Fraser Institute tally. For the Fraser Institute, impoverished, unstable El Salvador is a far freer place than many of the richest and most egalitarian countries in the world—places like Norway, Germany, France, and Sweden. Indeed, the statistical correlation between the two sets of country scores is actually *negative* (and statistically significant) for the Fraser Institute’s top ten countries; the correlation is near-zero (and not statistically significant) across broader samples. Advocates of *laissez faire* economic policies argue that their recommendations will enhance economic growth. This is not clear, nor is it even clear whether faster growth under a *laissez faire* regime translates in any predictable way into higher living standards for the majority of the subjects of that regime.

It is tempting but incorrect to identify “economic freedom,” according to the Fraser Institute’s view, with “less government”. Obviously the Fraser Institute’s approach favours an absence of government intervention in key areas (such as labour markets, international trade, economic regulation, and so on). But this does not imply that government is absent or power-

less. Indeed, economic freedom for the wealthy and powerful presupposes a strong and interventionist government, one which is prepared to intervene forcefully to protect the interests of those who own financial wealth or operate businesses. For example, the protection of private property features centrally in this conception of freedom. In modern times, this means more than simply providing the legal and enforcement apparatus to protect the haves from the have-nots. In an era of computer software and biotechnology, the very concept of “private property” has changed dramatically to include knowledge as well as commodities and money. This has required ever-more forceful and creative interventions by government to protect the intellectual property rights of firms and investors.⁵

Similarly, the Fraser Institute’s emphasis on the maintenance of low inflation provides another example of the still-powerful but one-sided nature of government in an economically “free” society. Standard economic theory holds that to keep inflation at a low, steady level, the central bank of an economy must intervene forcefully with higher interest rates to slow down job-creation should the unemployment rate fall close to its long-run “natural” level (technically defined as the Non-Accelerating Inflation Rate of Unemployment, or NAIRU). What an incredibly powerful lever of government intrusion into the economy! A single unelected government agency is granted the power to slow down the expansion of the entire country, and fundamentally shift relative prices (by increasing the price of capital relative to the prices of other factors), in order to preserve a low-inflation eco-

Table 1
Competing Visions of Well-Being

	Ranking, Fraser Institute Economic Freedom Index	Ranking, UNDP Index of Human Development
Hong Kong	1	26
Singapore	2	24
New Zealand	3	20
United States	4	3
United Kingdom	5	10
Ireland	6	18
Australia	7	4
Canada	7	1
Luxembourg	9	17
Netherlands	9	8
Switzerland	9	13
Argentina	12	35
Denmark	12	15
Belgium	14	7
El Salvador	14	104
Japan	14	9
Panama	14	59
Chile	18	38
Finland	18	11
Spain	18	21
Thailand	18	76
Costa Rica	22	48
Germany	22	14
Norway	22	2
Austria	25	16
Bolivia	25	114
France	25	12
Iceland	25	5
Portugal	25	28
Sweden	25	6

“The Fraser Institute’s inter-provincial rankings tell us a lot about the relative pro-business orientation of differing provincial governments, but it does not tell us much about the economic freedom of most Canadians.”

economic environment. The costs of this policy are huge, borne not just by the unemployed but by all workers (whose security and bargaining power are undermined by the deliberate maintenance of permanent unemployment). Yet this is a form of government intervention that, in the Fraser Institute model, *promotes* economic freedom—more specifically, by cementing the freedom of the owners of financial wealth from the risk that their wealth will be inflated away.

Despite its one-sided and ideologically biased approach, the Fraser Institute’s index of economic freedom is not uninformative. It is an interesting example of an attempt to develop a quantitative index on the basis of numerous underlying structural and institutions components, many of which are qualitative in nature. And the final scores provide a useful measure of international variation in economic and institutional arrangements. But this variation does not reflect differences in “economic freedom” defined in any broad, genuine way. The index should be renamed an *Index of Capitalist Freedom*. To what extent are a jurisdiction’s policies and institutions designed so as to maximize the ability of business owners and financial investors to extract maximum profit on a sustained basis from their undertakings? The Fraser Institute’s ranking project constitutes a good first start at answering this question.

In 1999 the Fraser Institute extended its economic freedom project to include the development of an index comparing economic freedom across the ten Canadian provinces.⁶ The motivation for this work is clearly as much political as it is academic. Months before the study was even released, an impatient Fraser Institute director Michael Walker leaked its key finding in a newspaper column: British Columbia ranked very low on the freedom index, while Alberta and Ontario vied for top spot. Indeed, embarrassing the beleaguered NDP government in B.C. seems to be a key motivation for the entire project. ‘Right-wing good, left-wing bad’ is a simple mnemonic that will help readers grasp the essential thrust of this Animal-Farm-like analysis of economic policy in Canada. The report suggested that residents of a less-free province such as Quebec could improve their annual per capita income levels by as much \$11,000 simply by emulating the economic policies and structures of highly-free Alberta. (Presumably, emulating Alberta’s oil wouldn’t hurt, either!) The Fraser Institute’s inter-provincial rankings tell us a lot about the relative pro-business orientation of differing provincial governments, but it does not tell us much about the economic freedom of most Canadians.

Economic Freedom (for the Rest of Us)

If one is not a capitalist, then an *Index of Capitalist Freedom* will not provide much indication of one's economic rights, protections, and prospects. Most people in the world are not capitalists, in the sense that they do not own businesses or wealth on the basis of which they can support themselves. We need an alternative index, therefore, to measure the extent to which differing policies and institutions make it easier or more difficult for the rest of us to freely and productively lead our economic lives.

This paper presents an *Index of Economic Freedom (for the Rest of Us)*, called the EFRU index, which is intended to measure the impact of labour market conditions and government policies, rules, and institutions on the economic prospects of those members of society who must work for a living.⁷ The index is calculated on the basis of 14 different component variables (some of which are themselves composite in nature, so that a total of some 25 different economic variables is considered by the analysis).⁸ These variables are in turn grouped and weighted into three broad categories, each of which composes one-third of the final index:

- 1) Employment (representing the freedom to work)
- 2) Earnings (representing the freedom to earn wages and salaries)
- 3) Equality and Security (representing the freedom to enjoy a high degree of economic stability, fairness, and security)

Together these categories reflect the extent to which the members of society are able to support themselves in productive employment, receive an income which reflects their productivity and allows for an adequate standard of living, and are protected from arbitrary discrimination or dislocation on the basis of personal characteristics or economic misfortune.

The individual variables contained within each of these three broad categories, and their weighting within those categories, are summarized as follows:

Employment:

- employment rate ($\frac{2}{3}$)
- index of precarious employment (part-time and self-employment; ($\frac{1}{6}$))
- duration of unemployment ($\frac{1}{6}$)

Earnings:

- average real weekly wages and salaries ($\frac{1}{2}$)

"Together these categories reflect the extent to which the members of society are able to support themselves in productive employment, receive an income which reflects their productivity, and are protected from arbitrary discrimination or dislocation."

- labour compensation as a share of total provincial GDP at market prices ($\frac{1}{4}$)
- real minimum wage ($\frac{1}{4}$)

Equality and Security:

- equality of income distribution, measured by the top-to-bottom quintile ratio of after-tax income ($\frac{1}{6}$)
- earnings gap between male and female workers ($\frac{1}{6}$)
- earnings gap between hourly employees and salaried workers ($\frac{1}{6}$)
- family poverty rate ($\frac{1}{10}$)
- real government spending on public programs per capita ($\frac{1}{10}$)
- real social assistance benefits ($\frac{1}{10}$)
- job leavers as a share of total employment ($\frac{1}{10}$)
- union members as a share of total employment ($\frac{1}{10}$)

Details on the choice and definition of variables, their weighting, sources of data, and the quantitative methodology followed in the construction of the final EFRU scores are provided in the Appendix.

The selection of variables appearing in the EFRU index differs notably from the Fraser Institute's ranking (which does not generally consider the employment, earnings, or economic security of workers to be a relevant issue). A few variables might even appear in both indices, but with opposite signs. For example, the Fraser Institute considers public spending to be an intrusion on economic freedom, while the present study recognizes the beneficial impact of public services in underwriting the standard of living of working people and thus enhancing both their quality of life and their bargaining power in the private labour market. Similarly, the Fraser Institute considers a high minimum wage to be a freedom-destroying intrusion by government into the workings of a "free" labour market, and hence a violation of the right of employers to hire labour services at the lowest price that can be extracted on the basis of compulsion and hardship prevailing in the labour market at any point in time. In the EFRU, however, a higher minimum wage enhances the economic freedom of low-wage workers by guaranteeing a more adequate minimum compensation in return for their work effort.⁹ Once again, economic freedom is very much in the eye of the beholder.

Any attempt to construct a quantitative index on the basis of numerous weighted composite variables is to a large extent inherently arbitrary, and the selection of variables (and their weighting) for the EFRU index will undoubtedly spark some disagreement. Still, the present index is less arbi-

trary, in some important ways, than the Fraser Institute’s economic freedom index—which not only assigns quantitative weightings to component variables in a necessarily subjective manner, but even incorporates some series as index components which themselves consist of scores subjectively assigned to reflect variance in an underlying qualitative indicator.¹⁰ In contrast, all of the data utilized in computing the EFRU index are publicly available series collected by statistical agencies following normal survey methodologies.

Finally, the present study is released in the context of more significant longer-term work by other researchers to develop alternative “quality of life” indicators.¹¹ Together these initiatives hold great potential for developing a better understanding of the real determinants of living standards and how those standards are changing over time. The particular focus of the present study is to engage explicitly with the conception of “economic freedom” that is advanced by the advocates of free-market economic policies.

Canadian EFRU Scores Through the 1990s

As explained in the methodological appendix, the overall EFRU index for Canada is arbitrarily scaled so that it (and its 14 component sub-indices) equals 100 in the base year, 1992. Aggregate scores for the overall EFRU and its three major component indices are summarized for the 1990s in Table 2.

The overall EFRU started the decade at a peak level of 103.3 in 1990, the first year covered by this study. The overall index then fell sharply and quite steadily over the next seven years (see Figure 1). As expected, the worst one-year decline was experienced from 1991 to 1992, coincident with the severe recession that was experienced in most of the country. The total EFRU index for Canada dropped by over three full points between 1990 and 1992. Surprisingly, however, the EFRU index continued to fall in the subsequent five years, by a cumulative total of 1.5 more points, even though

Table 2
National EFRU Scores by Sub-Index

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL	103.3	101.8	100.0	99.7	99.3	99.6	99.1	98.4	99.6	100.7
Employment	107.5	103.6	100.0	98.3	98.6	100.0	99.8	102.0	105.0	107.2
Earnings	99.2	98.0	100.0	99.5	99.4	98.4	98.3	98.3	99.2	99.4
Equality	103.1	103.8	100.0	101.2	99.9	100.4	99.1	95.0	94.7	95.5

“While hundreds of thousands of new jobs have been created in the past two years, the benefits of that job growth for Canadians have been muted by the simultaneous increase in insecurity and inequality.”

the Canadian economy was technically in recovery. The aggregate EFRU reached a low point of 98.4 points in 1997. Employment rates and real earnings stabilized during these first five years of the recovery. But the equality and security component of the EFRU declined—especially after 1995, in the wake of the historic spending cuts implemented by the federal and many provincial governments. This continued to drag down the overall EFRU score for another couple of years, until the job recovery shifted into high gear in 1998 and 1999.

In the last two years, the overall EFRU score has improved by 2.3 points, mostly on the strength of better employment levels, assisted by a slight improvement in real earnings. The overall EFRU score remains, however, over 2 points lower than it was in 1990. Even though employment results have recovered to approximately pre-recession levels, the overall economic position of working Canadians has been undermined by the erosion of the various security- and equality-promoting social policies and structures. While hundreds of thousands of new jobs have been created in the past two years, the benefits of that job growth for Canadians have been muted by the simultaneous increase in insecurity and inequality.

Figure 1 dramatizes that the current economic recovery only began to trickle down to working people beginning in 1998. Technically, the recovery in Canadian GDP commenced in 1992, and many observers have since waxed eloquent about the subsequent “longest uninterrupted expansion” of the postwar era. For working Canadians, however, the party has only



just commenced, and their economic well-being is still well below pre-recession levels. This makes it all the more important that job creation and growth be sustained, rather than being deliberately cut short through higher interest rates motivated by premature fears of a resurgence in inflation.

The contrasting contributions of the three major sub-indices of the overall EFRU can be illustrated in more detail. Figure 2 illustrates the changing patterns of the overall EFRU and its three major components through the 1990s. The employment sub-index fell sharply from 1990 to 1992, and has since recovered to approximately its 1990 levels. The real earnings index has hovered between 98 and 100 through the entire decade, showing relatively little variability. The equality and security sub-index, on the other hand, rose temporarily in 1991 with the enhanced social security and unemployment insurance payouts that were sparked by initial layoffs. The sub-index then declined, however, largely in the wake of government spending cutbacks and other structural changes; this decline was particularly severe between 1995 and 1997. It has continued to languish at the post-1997 levels of approximately 95 points. Figure 2 thus indicates that the economic well-being of Canadian workers is now based mostly in the current strength of labour markets—a strength that is much appreciated, but which cannot be expected to last forever. The network of social programs and insurance measures which partially underwrote the well-being of Canadian workers in earlier years, and which pro-actively helped to offset the decline in economic conditions during the first years of the 1990s recession,

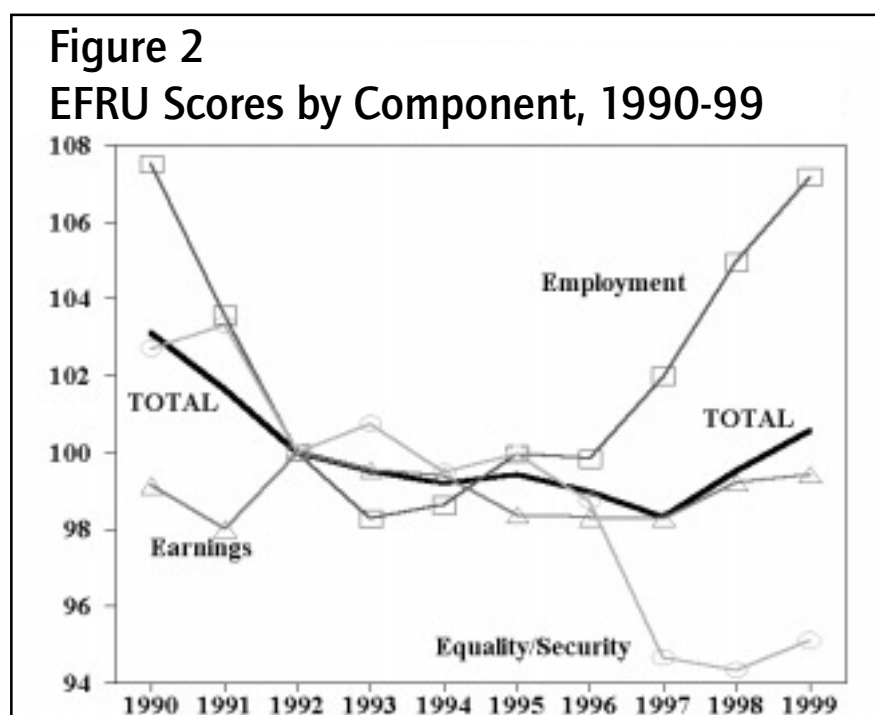


Table 3
Change in EFRU Scores by Component, Canada, 1999 vs. 1990

	Weighting	1999 Avg.	1990 Avg.	Change
TOTAL EFRU SCORE	1	100.7	103.3	-2.6
EMPLOYMENT SUB-INDEX	0.33	107.2	107.5	-0.3
Employment Rate	0.67	104.7	104.6	0.1
Underemployment Index	0.17	98.9	103.4	-4.5
Duration of Unemployment	0.17	125.3	123.2	2.1
EARNINGS SUB-INDEX	0.33	99.4	99.2	0.3
Weekly Earnings	0.50	99.5	99.9	-0.4
Labour Income Share	0.25	93.4	97.1	-3.7
Minimum Wage	0.25	105.3	99.8	5.5
EQUALITY/SECURITY SUB-INDEX	0.33	95.5	103.1	-7.7
Income Distribution	0.17	88.4	101.7	-13.3
Gender Equality	0.17	103.3	95.6	7.7
Hourly/Salaried Equality	0.17	104.6	102.0	2.6
Poverty Rate	0.1	106.7	119.7	-13.0
Public Program Spending	0.1	89.1	102.5	-13.4
Social Assistance Rate	0.1	92.9	102.4	-9.6
Quit Rate	0.1	83.2	108.6	-25.4
Unionization Rate	0.1	89.0	100.7	-11.7

“In the next labour market downturn, working Canadians will face the full impact of negative market developments, unbuffered by the intervening effects of social programs.”

no longer underpins the economic position of Canadians to such a degree. This implies a significant risk that in the next labour market downturn, working Canadians will face the full impact of negative market developments, unbuffered by the intervening effects of social programs.

The increasingly unbalanced nature of economic well-being in Canada can be illustrated further, by decomposing the change in the economic freedom of working Canadians into the respective changes in the EFRU components. Consider first the detailed decomposition provided in Table 3. The employment sub-index was slightly lower in 1999 than in 1990. The employment rate had recovered to pre-recession levels. There was a noted increase in precarious employment during the 1990s, driven largely by the rise in self-employment (although this trend reversed itself moderately in 1998 and 1999). This deterioration in employment security was offset for our purposes by a slight decline in the average duration of unemployment. On average, then, the employment sub-index was only slightly lower in 1999 than in 1990—by 0.3 points.

Similarly offsetting trends are also visible within the broader earnings category. Real weekly earnings of Canadians declined slightly over the decade as a whole. Since earnings were stagnant, despite modest improve-

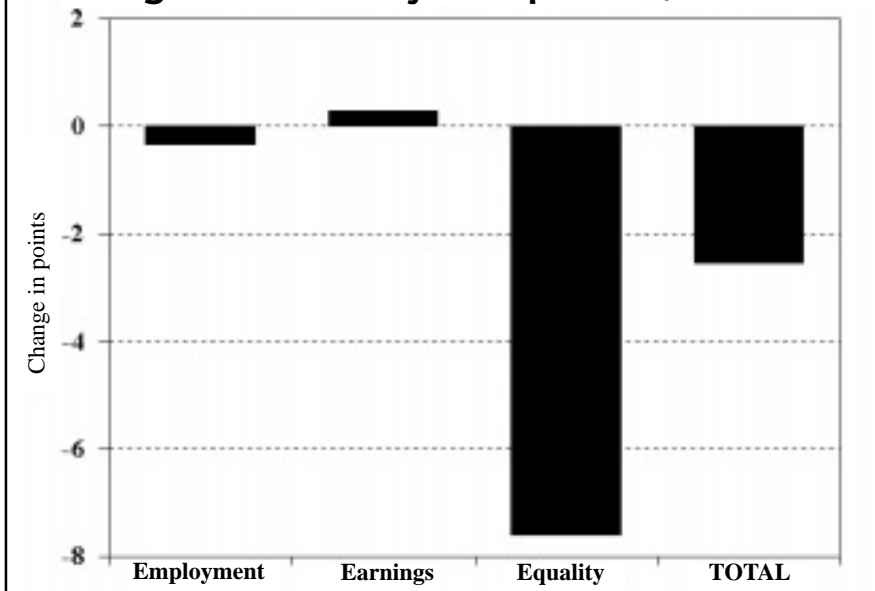
ments in total productivity, labour's share of GDP declined during the decade. But this was offset, for the purposes of the EFRU earnings sub-index, by a modest increase in the real value of minimum wages in Canada during the same period. As a result, the EFRU earnings sub-index grew slightly between 1990 and 1999—also by 0.3 points.

The entire 2.6 point decline in the overall EFRU between 1990 and 1999 can thus be ascribed to a significant erosion in the equality and security sub-index, which fell by almost 8 points over the decade.¹² Large declines in the equality/security category were experienced in the quit rate (a 25 point decline in the normalized index, indicating that despite lower unemployment rates Canadian workers still feel very insecure about leaving their current jobs), real program spending (a 13 point decline), the equality of income distribution (a 13 point decline), the poverty rate (a 13 point deterioration), the unionization rate (a 12 point decline), and real social assistance benefits (a 10 point decline). Not all categories of the equality and security sub-index deteriorated during the decade: greater equality continues to be observed in the earnings of men and women, and the earnings of hourly and salaried workers have also become slightly more equal. Nevertheless, the overall trend in the equality and security category is clearly negative. This explains why Canadian workers are still significantly worse off than they were before the last recession, even though formal labour market indicators (such as the unemployment rate) suggest that the labour market has now fully recovered.

The importance of the erosion in the social safety net to the overall decline in the economic freedom of Canadian workers during the 1990s is highlighted in Figure 3, which illustrates the decade-long changes in the EFRU and in its three major components. A slight improvement in real earnings capacity is offset by a slight deterioration in employment opportunities. The large decline in the equality and security sub-index thus totally explains the decline in the overall EFRU between 1990 and 1999. Canadian workers are indeed flying without a net. This is fine for as long as strong private labour market conditions allow them to stay in the air. But while clearly appreciating the new jobs and incomes which have been generated in the past two years, we also need to be mindful of the potential dangers that lie ahead in the likely event of another labour market downturn. More than at any other time in decades, the economic well-being of Canadian workers is fully dependent on the opportunities that may (or may not) be generated by the operation of increasingly unconstrained private markets.

“More than at any other time in decades, the economic well-being of Canadian workers is fully dependent on the opportunities that may (or may not) be generated by the operation of increasingly unconstrained private markets.”

Figure 3
Change in Scores by Component, 1990-99



EFRU Scores for the Canadian Provinces

In addition to capturing changes in the economic position of working people in Canada over time, the EFRU database is also useful in comparing the economic position of workers living in different provinces. This section will summarize the interprovincial comparisons which can be undertaken with the use of EFRU data.

A summary of the scores for the overall EFRU and its three major components for 1999, and the corresponding provincial rankings, is provided in Table 4. Complete listings of provincial EFRU scores for each year during the 1990s are provided in Appendix Tables A1 through A10; a complete report of the raw provincial data which was used to construct the EFRU scores in each year is provided in Appendix Tables B1 through B10.

The 1999 EFRU rankings reflect the same distinction between the “have” provinces and the “have-not” provinces that characterizes other socio-economic comparisons in Canada. Ontario is found to exhibit the highest level of economic freedom for workers of the ten provinces, on the strength of the highest earnings in Canada, and relatively good employment opportunities. Ontario scores relatively lower (seventh out of ten) on the equality and security index. Second place is held by British Columbia, which is second to Ontario with the highest earnings, exhibits just an average score on equality and security, and a somewhat below-average employment performance.

Alberta, the third “have” province in Canada, places third. It is easier to find a job in Alberta than anywhere else in Canada. But that province’s pro-business legal and institutional climate shift the rest of the labour market equation clearly against workers. Real earnings opportunities are surprisingly only mediocre in Alberta—despite the province having the tightest labour markets and the highest average labour productivity in the country. And on the equality and security sub-index, Alberta places dead last of the ten provinces; this further pulls down the province’s overall EFRU score. Alberta has the most unequal distribution of income in Canada, the greatest inequality between men and women, a relatively high poverty rate, the lowest social assistance benefits in the country, and the lowest unionization rate. All of this helps to explain why Alberta’s working people are not especially well-off compared to Canada-wide averages.

Among the “have-not” provinces, Quebec places surprisingly high in the EFRU ranking: fourth. Despite a weaker economy and relatively poorer job-creation (Quebec ranks eighth out of ten on the employment index), Quebec scores near the top of the earnings sub-index, and scores average on the equality/security sub-index. Through its wage and social market policies, Quebec seems to do a better job of transmitting a limited amount of economic growth and job creation into income and security for its population. Manitoba scores fifth in the EFRU ranking, with a strong employment record offsetting poorer scores in the earnings and equality/security indices. New Brunswick and Prince Edward Island rank sixth and seventh, respectively, pulled up by relatively strong scores in the equality and

“It is easier to find a job in Alberta than anywhere else in Canada. But that province’s pro-business legal and institutional climate shift the rest of the labour market equation clearly against workers.”

Table 4
EFRU Rankings by Category, 1999

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Ontario	105.9	1	111.2	3	113.4	1	93.2	7
British Columbia	105.0	2	104.8	7	113.1	2	97.3	5
Alberta	102.6	3	120.5	1	100.7	4	86.5	10
Quebec	102.1	4	103.5	8	107.5	3	95.4	6
Manitoba	100.1	5	113.8	2	94.5	7	92.1	9
New Brunswick	100.1	6	105.2	6	96.3	5	98.8	2
P.E.I.	98.9	7	107.1	5	91.6	9	98.1	3
Saskatchewan	98.5	8	109.0	4	89.0	10	97.6	4
Nova Scotia	97.2	9	103.4	9	95.3	6	92.8	8
Newfoundland	96.4	10	93.4	10	93.0	8	102.9	1
Canadian Average	100.7		107.2		99.4		95.5	

security sub-index. Saskatchewan places eighth, with average employment and equality/security scores offset by very low wages. Hard-hit by the collapse of the fishing industry and deep reductions in government social programs, the other Atlantic provinces—Newfoundland and Nova Scotia—fill the bottom positions in the EFRU ranking.

As interesting as the current EFRU scores attained by each province are the directions and magnitudes of change in the economic freedom rankings over time. Table 5 summarizes changes in the EFRU rankings over

Table 5
EFRU Rankings by Province by Year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Ontario	1	1	1	1	1	1	1	1	1	1
British Columbia	2	2	2	2	2	2	2	2	2	2
Alberta	3	3	3	4	4	5	5	6	4	3
Quebec	4	4	4	3	3	3	3	3	3	4
Manitoba	5	7	7	7	7	6	7	7	7	5
New Brunswick	9	9	5	5	6	7	6	4	5	6
P.E.I.	8	6	8	8	5	4	4	5	6	7
Saskatchewan	10	10	10	10	10	10	10	10	8	8
Nova Scotia	7	5	6	6	8	8	8	9	9	9
Newfoundland	6	8	9	9	9	9	9	8	10	10

Figure 4
Provincial EFRU Rankings 1990-99

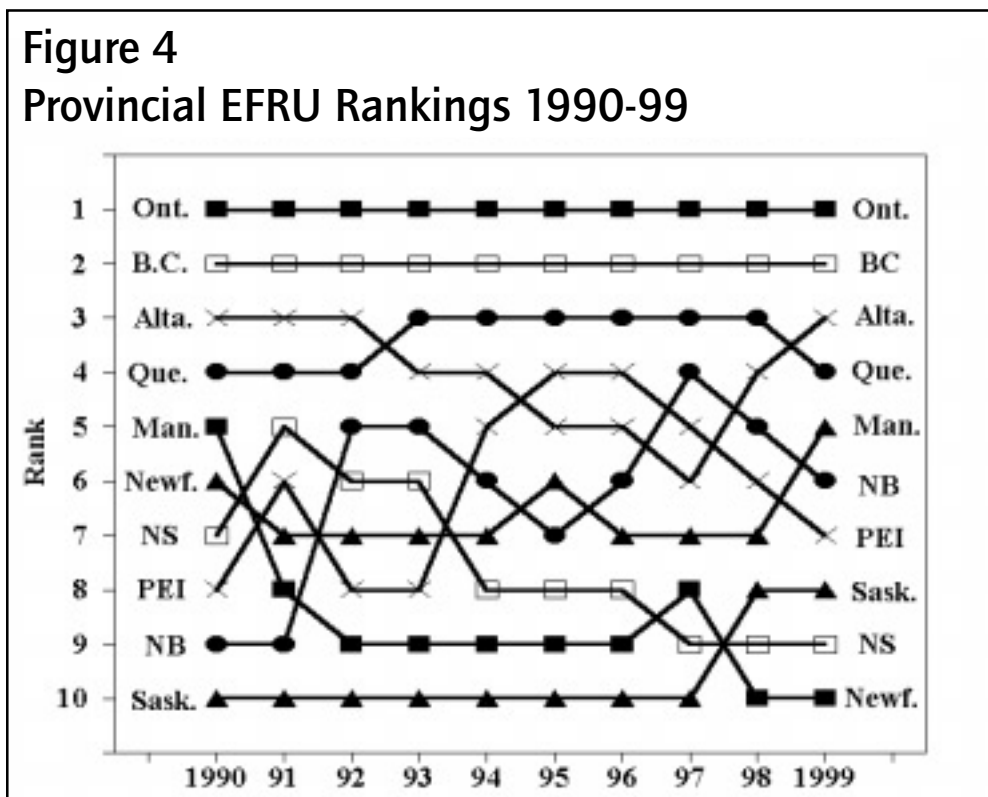


Table 6
EFRU Scores by Province by Year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Alberta	105.5	104.0	101.7	101.0	100.2	99.4	99.4	98.0	99.5	102.6
British Columbia	106.8	104.8	104.5	104.2	103.2	104.5	104.4	102.9	104.4	105.0
Manitoba	101.6	100.2	98.9	97.1	97.3	98.1	97.6	96.9	98.8	100.1
New Brunswick	100.6	99.8	99.9	100.1	98.1	98.1	98.2	98.8	99.2	100.1
Newfoundland	101.5	99.9	97.1	96.0	95.6	95.9	94.0	94.9	95.2	96.4
Nova Scotia	101.3	100.8	99.3	99.5	96.7	96.5	95.4	94.9	96.5	97.2
Ontario	110.7	107.5	106.5	106.2	106.6	106.1	105.7	104.2	105.3	105.9
P.E.I.	100.9	100.4	97.6	97.0	98.2	100.5	101.3	98.2	98.9	98.9
Quebec	104.7	102.5	100.5	101.8	102.3	102.2	101.6	101.8	101.9	102.1
Saskatchewan	98.8	97.9	95.2	93.7	94.9	94.6	93.4	94.0	96.7	98.5
Canadian Average	103.3	101.8	100.0	99.7	99.3	99.6	99.1	98.4	99.6	100.7

the 1990s, which have been relatively stable. Figure 4 illustrates the same information in a visual format. The top five provinces in the 1999 ranking—Ontario, B.C., Alberta, Quebec, and Manitoba—held exactly the same positions as they did at the beginning of the decade. Ontario and B.C. held down first and second place, respectively, right through the decade—and through several changes in political governance. For example, Ontario’s first-place status was inherited from the former Liberal government of the late 1980s, sustained under the one-term NDP administration of 1990-95, and has persisted under the Mike Harris conservatives. This stability in EFRU rankings immediately highlights that there is no predictable, unidirectional link between the politics of a region’s government and the demonstrated level of economic freedom that is enjoyed by its working residents. Rather, it is the deeper and slower-changing economic, structural, and institutional features of an economy and a society that, together, determine the economic status of its workers.¹³

Table 6 summarizes the evolution of aggregate EFRU scores for the ten provinces over the decade as a whole. One highlight of this table is the contrast between the experience of British Columbia and Alberta over the decade, which provides a vivid lesson of the potential dangers for working Canadians of a socio-economic system that is strictly dependant on the vagaries of private market outcomes. Alberta started and finished the decade in third place in the EFRU rankings, on the strength of resource-driven economic strength that was enjoyed in both of these years. In between, however, Alberta’s demonstrated degree of economic freedom tumbled dramatically in line with the economic weakness that accompanied the temporary, recession-driven slump in world oil prices. The overall EFRU fell by over 7 points in Alberta between 1990 and 1997—more than in any other

“There is no predictable, unidirectional link between the politics of a region’s government and the demonstrated level of economic freedom that is enjoyed by its working residents.”

province—due largely to falling employment levels, and partly to the sharp retrenchment in social and program spending undertaken by the provincial government during the mid-1990s. By 1997, Alberta ranked sixth in the EFRU index. The province has subsequently regained over 4 points in the absolute EFRU score, and 3 positions in the EFRU ranking; rising world oil prices have spurred the provincial economy into boom mode once again, and real earnings in particular have rebounded. This is obviously welcome news for working Albertans, while it lasts. But the boom-and-bust cycle of economic well-being in Alberta, mirroring so closely the boom-and-bust pattern of the provincial economy, powerfully indicates the risks for working people of tying their fortunes too closely and directly to ever-fluctuating market outcomes.

In B.C., on the other hand, the economic freedom of workers rests on a more diversified base. Market-driven employment opportunities are supplemented by an institutional structure of wage determination that helps to give the province among the highest earnings in Canada, and a social safety net that—while far from great—is certainly more comprehensive than Alberta’s. As a result, economic freedom was more stable during that province’s economic slowdown of the mid-1990s. B.C.’s overall EFRU score fell by less than four points from 1990 to 1997—about one half as much as the decline in Alberta’s EFRU during the same period—and it has since largely recovered. B.C.’s second-place status in the EFRU rankings was never threatened (indeed, by 1999 less than one point separated B.C. from first-place Ontario).

The Canada-wide decline in economic freedom during the 1990s was experienced very broadly in the individual provinces, with overall EFRU scores falling in all ten provinces (see Table 7 and Figure 5). Two provinces

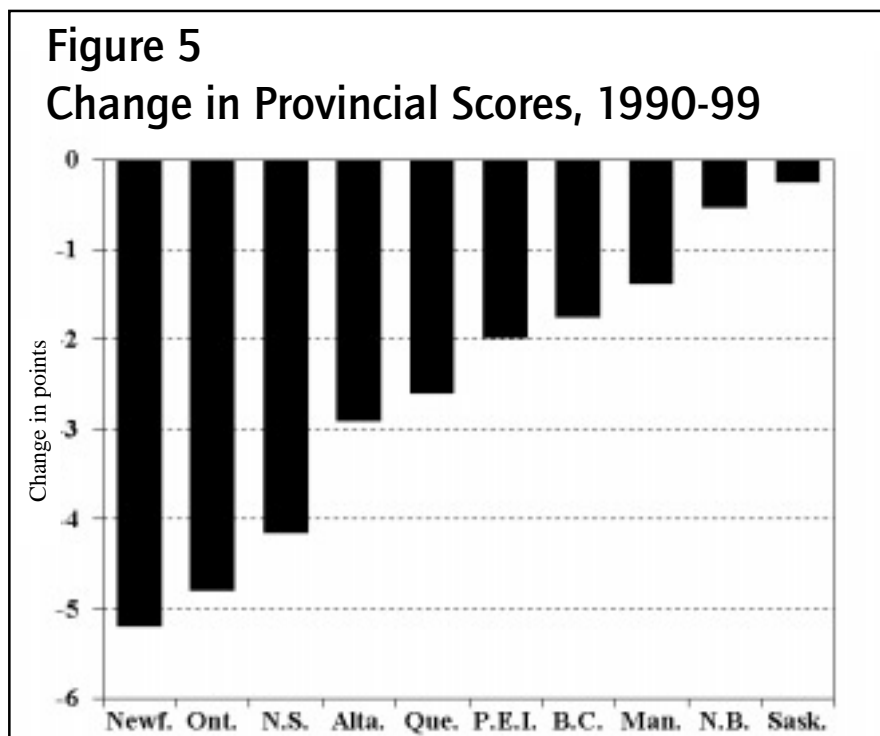
Table 7
EFRU Scores and Ranking by Province, 1999 vs. 1990

	1999 Rank	Change Since 1990	1999 Score	Change Since 1990
Alberta	3	0	102.6	-2.9
British Columbia	2	0	105.0	-1.8
Manitoba	5	0	100.1	-1.4
New Brunswick	6	3	100.1	-0.5
Newfoundland	10	-4	96.4	-5.2
Nova Scotia	9	-2	97.2	-4.2
Ontario	1	0	105.9	-4.8
P.E.I.	7	1	98.9	-2.0
Quebec	4	0	102.1	-2.6
Saskatchewan	8	2	98.5	-0.3

led the decline, with cumulative EFRU declines of about 5 points. Not surprisingly, one of these provinces was hard-hit Newfoundland, hammered by both a collapse in regional resource industries and by cutbacks in federal transfer payments and social programs. Surprisingly, Ontario experienced the second largest deterioration in economic freedom during the 1990s. This decline was rooted in the province's employment performance (despite recent improvements, provincial employment opportunities are still inferior to the conditions that preceded the recession) and by a large 10-point decline in the employment and security sub-index. Indeed, only Alberta experienced a larger erosion in its equality / security score than Ontario during the decade. Interestingly, while Ontario's and Newfoundland's aggregate EFRU scores fell by similar amounts during the decade, Ontario's EFRU ranking was unchanged while Newfoundland fell by four places (from 6th in 1990 to 10th in 1999), the largest decline in rank of any province. Ontario's 4-point lead in the EFRU standings in 1990 allowed it to retain its first-place position despite the large decline in its absolute level of economic freedom; but the province's leadership of the EFRU rankings is now contestable.

"The Canada-wide decline in economic freedom during the 1990s was experienced very broadly in the individual provinces, with overall EFRU scores falling for all ten of the provinces."

Two provinces, Saskatchewan and New Brunswick, experienced only small declines in their EFRU scores, of less than one point in each case. New Brunswick improved its position in the standings by three positions



“According to the perspective of free-market economics, Canada’s has become a significantly ‘freer’ economy. Yet for most Canadians—those who must work in a paying job to support themselves—economic freedom has declined.”

over the decade, rising from 9th to 6th, while Saskatchewan rose by two positions, from 10th to 8th.

Conclusion

Economic freedom is in the eye of the beholder, and the dramatic changes which have been experienced in Canada’s economy during the 1990s provide ample evidence of this edict. Economic policies in Canada have shifted substantially in the direction of deregulation, a smaller and less interventionist government, and greater reliance on private markets as the guiding force of economic and social development. According to the perspective of free-market economics, therefore, Canada’s has become a significantly “freer” economy.¹⁴ Yet for most Canadians—those who must work in a paying job to support themselves, rather than skimming the income from accumulated wealth or privately-owned businesses—economic freedom has declined. Thanks in large part to those same conservative economic policies—tight-money anti-inflation policy, radical cutbacks in government spending, and the erosion of institutional protections in labour markets and social policy—economic life for most Canadians has become more challenging, and indeed oppressive.

More recently, Canadian workers have heaved a collective sigh of relief as strong economic growth has produced falling unemployment rates and growing family incomes. This progress is reflected in two strong year-over-year gains in the national aggregate EFRU score since 1997, which have single-handedly erased over half of the decline in the economic well-being of Canadian workers that was experienced earlier in the decade. Because of the significant erosion of the social and economic institutions which underwrite the economic status of working people, however, overall economic freedom still remains notably below the conditions which prevailed prior to the last recession, even though formal labour market indicators (such as the unemployment rate) have fully recovered.

Comparing 1999 to 1990, the end result has been a moderate erosion in the overall economic well-being of those Canadians who must work for a living, and perhaps more importantly a significant shift in the composition of that well-being. Canadians are more directly dependent on the labour market for their economic essentials than at any other time in our recent history. This may not seem like such a bad thing while we are riding the “up”-side of the economic roller-coaster. But sooner or later the private markets which have generated the bulk of recent job

gains (and consequent improvements in the economic freedom of Canadians) will turn down. With many of the programs and institutions which formerly insulated Canadian workers from negative market outcomes either weakened or eliminated altogether, Canadians will feel the full force of the next recession more directly and bitterly than any recession since the 1930s. This should be ample reason for us to collectively reconsider the spending cutbacks and market-driven deregulation which have been implemented over the past decade. Perhaps now is the time, with the economy growing and incomes rising, for Canada to begin to rebuild modern policies and institutions which will help to insulate, diversify, and improve upon the offerings that are currently served up by the “free” market.

“Because of the significant erosion of the social and economic institutions which underwrite the economic status of working people, overall economic freedom still remains notably below the conditions which prevailed prior to the last recession.”

Appendix: Methodology and Data

Changes from 1999 EFRU Report

The EFRU methodology was first introduced in a 1999 report, *Economic Freedom (for the Rest of Us)*, by Jim Stanford (Ottawa: Canadian Centre for Policy Alternatives). The present study builds upon that initial report, preserving but refining the overall methodology. The following changes have been introduced into the modified index:

- One new variable, the level of trade union membership, has been introduced into the equality and security category, to reflect the role of unions in enhancing workplace job security and income distribution.
- The equality and security sub-index formerly considered length of job tenure as a measure of the stability of employment relations. This variable was found to not adequately capture the desired dimension of economic security; in fact, because the average job tenure of remaining employees tends to be higher following a recession (after more junior workers have been laid off), job tenure may actually vary inversely with true job security. Thus job tenure was replaced in the new version of the EFRU with a ratio of unemployed job leavers to total employees; this reflects more accurately the degree of confidence which workers possess about their ability to quit an unacceptable job. This “quit rate” will tend to increase when workers feel relatively more secure.
- The equality and security sub-index also formerly considered the Gini coefficient of after-tax income distribution as a measure of the distribution of income in each province. New Statistics Canada publications report after-tax income levels by quintile for each province; this allows for the calculation of a ratio of top-to-bottom quintile income levels, which we consider to be a more transparent and comprehensible summary of income distribution than the Gini coefficient.
- The initial EFRU study relied upon an imputed measure of labour income as a share of total GDP, based on average weekly earnings. The current study is being issued later in the calendar year (September rather than January), and hence can take advantage of recently issued data on the components of provincial GDP to calculate a more accurate meas-

ure of the labour share of total income. This new measure includes, appropriately, the value of non-wage benefits in total labour income.

Overall Methodology

The EFRU index assigns a numerical score to each jurisdiction on the basis of a weighted composite of 14 different indicators of the economic freedom of Canadians who support themselves through real work activity (rather than through income derived from financial wealth or business property).

The index is arbitrarily scaled so that the average EFRU score for Canada as a whole¹⁵ in 1992 equaled 100. However, the scores are cardinal (not just ordinal), in the sense that the relative positioning (not just the rank ordering) of differing jurisdictions is indicated by their relative scores. This methodology requires that scores on all statistical components entering the EFRU be converted into an index with mean equal to 100, such that higher numbers signify “more freedom.”¹⁶ To further ensure that each component of the EFRU exerts its appropriate weight in the final index calculation and provincial ranking, the component series are further normalized so that their standard deviation (a measure of the relative dispersal of individual province scores around the Canada average) equals 10.¹⁷ The procedure followed in this normalization process is as follows. First all individual scores in a series were multiplied by the ratio of 100 over the sample mean. For inverted series, this ratio was inverted (ie. the individual score was multiplied by the ratio of the sample mean to 100). Then the deviation between each adjusted individual score and the adjusted sample mean (100) was normalized by multiplying by the ratio of 10 over the original sample standard deviation. The final normalized scores were then calculated by adding the normalized deviation to the adjusted sample mean.

Data were available for most component series of the EFRU index for 1999. In a few cases, however, 1998 data were the most recent available; these series (all of which enter into the Equality and Security sub-index) are noted in the detailed descriptions which follow. To remain consistent, data for these series for the years prior to 1999 were also lagged. As a consequence, there will be a one-year delay before EFRU scores fully reflect changes in the economic well-being of Canadian workers (particularly changes in the network of socio-economic institutions which are measured in the equality and security sub-index).

Components of the EFRU

The EFRU index is composed of three equally-weighted broad categories, each of which composes one-third of the final index:

- 1) Employment (the freedom to work)
- 2) Earnings (the freedom to earn income from that work)
- 3) Equality and Security (the freedom to live free from undue risk of arbitrary dislocation or discrimination).

Each of the three broad category scores is in turn computed on the basis of weighted inputs of a variety of different sub-components, as specified below:

1) Employment:

No single factor is more important to the ability of a jurisdiction's citizens to live healthy, meaningful lives than the opportunity to find productive employment. In this category we consider the employment rate as a general indicator both of general labour market conditions and of the relative ability of individuals to participate in the labour market. The employment rate has become a more meaningful indicator of labour market conditions in recent years than the unemployment rate, since the latter is subject to variation as a result of changing patterns of formal labour force participation. (In other words, the unemployment rate may fall simply because individuals give up looking for paid employment; this does not reflect any improvement in their employment opportunities.) The employment rate constitutes two-thirds of the total employment index.

The employment index also incorporates a composite measure of precarious employment, to capture the fact that the simple distinction between employed and unemployed will fail to capture the underutilization of many Canadians who are not meaningfully employed to the full extent actually desired. This measure is calculated on the basis of the proportion of total employed workers who are part-time and self-employed. Given the preponderance of involuntary part-time work and marginal self-employment activity by workers who would prefer full-time paying jobs, this measure will provide an approximate indicator of the extent to which simple employment statistics overstate the opportunities for real productive work of Canadians.¹⁸

Finally, the employment index also reflects the average duration of unemployment in each province, measured in weeks. The effect of varying levels of unemployment from province to province is captured via the inclusion of the employment rate. However, varying durations of unemployment (capturing the typical length of time it takes an unemployed worker to find a new position) reflects an additional and separate dimension of the unemployment problem. A province may have a high unemployment rate but a short unemployment duration (such as P.E.I.), which suggests that the burden of unemployment in that province is somewhat more equally shared (between a larger number of job-seekers who are each unemployed for a relatively shorter period of time).

To sum up, the employment component of the EFRU index is composed of the following variables:

- Employment rate (employment as a share of working age population; composes $\frac{2}{3}$ of Employment score; source Statistics Canada Catalogue 11-010, *Canadian Economic Observer*).
- Index of precarious employment (1 less the sum of part-time and self-employment as a share of total employment; composes $\frac{1}{6}$ of Employment score; source Statistics Canada Catalogue 71-201, *Historical Labour Force Statistics*, Statistics Canada Catalogue 71-004, *Labour Force Historical Review CD ROM*, and Statistics Canada Catalogue 11-210, *Canadian Economic Observer*).
- Average duration of unemployment (in weeks; inverted; composes $\frac{1}{6}$ of Employment score; source Statistics Canada Catalogue 71-004, *Labour Force Historical Review CD ROM*).

2) Earnings:

Working Canadians must not only be employed in order to support themselves; they must also earn a decent income in return for that work that reflects both the absolute costs of supporting oneself and one's family, and also the general level of productivity of the work itself. For this reason we consider both the absolute level of labour income (measured by the industrial composite of average weekly wages and salaries), and employees' relative share of the economic pie in their jurisdiction (captured by the share of earnings in the average GDP produced per worker). This dual approach is adopted because we do not wish to completely equate a "free" jurisdiction

with a “rich” one; a free but less economically developed jurisdiction may pay lower wages in absolute terms, even though its working citizens may actually be receiving a higher share of total output. Nevertheless, due to the importance of living standards in absolute terms to the freedom of workers from poverty, the absolute level of earnings is ascribed primary weighting.

The Earnings sub-index also includes the minimum wage prevailing in each province, as a measure of the relative economic freedom of the lowest-paid members of the workforce. To sum up, the Earnings score includes the following variables:

- Average weekly earnings (real 1992 dollars per week, salaried and hourly; composes $\frac{1}{2}$ of Earnings score; source Statistics Canada Catalogue 11-210, *Canadian Economic Observer*, and Statistics Canada Catalogue 72-002, *Employment, Earnings and Hours*, 1999).
- Total labour compensation as a share of total provincial GDP at market prices per employee (percent: lagged data, composes $\frac{1}{4}$ of Earnings score; source Statistics Canada Catalogue 13-213, *Provincial Economic Accounts, Annual Estimates*).
- Yearly average provincial statutory minimum wage (real 1992 dollars per hour; composes $\frac{1}{4}$ of Earnings score; source Human Resources Canada, Workplace Information Directorate, unpublished data).

3) Equality and Security:

The members of an economically free society will be compensated without regard to gender, race, or socio-economic features over which they have no control; they will be free from discrimination, in this broad sense. Similarly, the scale of income differences between individuals resulting from differences in occupation will be moderated. Finally, a free society will provide for the economic well-being of its citizens on a consistent and ongoing basis, so that this well-being is not unduly put at risk by negative events (whether due to broader economic developments or unfortunate personal circumstance).

To measure economic equality, the Equality and Security index considers the relative distribution of total income between high-income and low-income families, captured by the ratio of after tax income of the top to the bottom quintiles of the distribution. It also includes the relative distribu-

tion of income between hourly employees (presumably those working in less-skilled or less senior positions) and salaried professions. Finally, it also includes a measure of the male-female earnings gap as an indicator of the relative freedom from discrimination in the economy. Unfortunately, comparable data on income differentials according to race are not available; it seems reasonably safe to assume, however, that an economy which is relatively “free” on these other three criteria will tend to exhibit the same sorts of legal and social policy patterns that would ensure greater freedom from racial economic discrimination.

We capture the stability and security of workers’ living standards through five different indices. The family poverty rate measures the proportion of families whose incomes fall below a relative low-income cut-off. We proxy the level of provision of basic social and human services by government (which underpins the overall standard of living of most citizens) with the level of program spending by both the federal and the provincial levels of government per capita.¹⁹ This measure might be considered the “social wage” of a society. The relative degree of protection for families who fall through the cracks of our volatile economy is captured by including provincial social assistance rates. In addition, a measure of the degree to which a worker has the ability to effectively leave their job in hopes of finding a better one is represented by the quit rate, which we proxy by the ratio of total job leavers (from Statistics Canada’s labour force data) as a share of total employment. Finally, unions play an important role in regulating both working conditions and income distribution in many Canadian workplaces, and so we consider the unionization rate as an index of the extent to which workers have the effective freedom to collectively try to improve their economic status as employees.

To sum up, the Equality and Security sub-index of the EFRU includes the following seven components:

- Ratio of after-tax income for top-to-bottom quintiles for all household units (inverted; lagged data; composes $\frac{1}{6}$ of Equality and Security score; source Statistics Canada Catalogue 75-202, *Income in Canada, 1998*).
- Ratio of female average earnings to male average earnings, for full-time permanent employees (percent; lagged data; composes $\frac{1}{6}$ of Equality and Security score; source Statistics Canada Catalogue 13-217, *Earnings of Men and Women* and Statistics Canada, unpublished data).

- Ratio of average hourly wage times average weekly hours of work for hourly employees to average weekly earnings for all hourly and salaried employees (percent; composes $\frac{1}{6}$ of Equality score; source Statistics Canada Catalogue 72-002, *Annual Estimates of Employment, Earnings and Hours*).
- Family poverty rate (percent of families below low-income threshold; inverted; lagged data; composes $\frac{1}{10}$ of Equality and Security score; source Statistics Canada Catalogue 75-202, *Income in Canada, 1998*).
- Federal and provincial government program spending per capita (real 1992 dollars; composes $\frac{1}{10}$ of Equality and Security score; source Finance Canada, *Fiscal Reference Tables*, Statistics Canada Catalogue 91-213, *Annual Demographic Statistics*).
- Total social assistance income for a single-parent family with one child (real 1998 dollars; lagged data; composes $\frac{1}{10}$ of Equality and Security score; source National Council of Welfare, *Welfare Incomes 1997-1998*).
- Unemployed job leavers as a share of total employment (percent; composes $\frac{1}{10}$ of Equality and Security score; source Statistics Canada Catalogue 71-004, *Labour Force Historical Review CD ROM*).
- Unionization rate (union members as a share of total employment; composes $\frac{1}{10}$ of Equality and Security Score; source Statistics Canada Catalogue 75-001, *Perspectives on Labour and Income*, Statistics Canada Catalogue 71-004, *Labour Force Historical Review CD ROM*).

Note that the Equality and Security sub-index can be decomposed into two equal component parts, an Equality index (consisting of the first three measures, all dealing with income distribution) and a Security index (consisting of the latter five measures, all of which reflect various dimensions of social security).

Intertemporal Comparisons

The goal of the present study is not solely to compare the level of economic freedom across provinces; we are also interested in how that level has changed over time. To provide an indication of the impact of economic restructuring and the prolonged recession of the 1990s on economic free-

dom in Canada, data on all component series were assembled for each year from 1990 through 1999.²⁰ EFRU scores and corresponding provincial rankings are then generated for each year in the study.

To ensure that EFRU scores are comparable over time as well as between provinces, the following methodology was adopted. Most of the 14 component series of the EFRU index are measured in terms that are not dependent on the nominal level of prices in the economy. In three cases, however, nominal magnitudes are utilized: weekly earnings, the hourly minimum wage, and total government program spending per capita.²¹ To ensure comparability across time, therefore, these series had to be converted into real 1992-dollar terms, by deflating by the proportional level of consumer prices (measured by provincial CPI scores, 1992=100) for each year.²²

The procedure through which the raw data series are normalized to calculate EFRU scores also complicates the comparability of EFRU scores over time. Recall that all 14 component data series for 1992 were normalized such that their mean equals 100, their standard deviation equals 10, and a higher number corresponds to greater freedom. If the same normalization were performed on data for other years, then no intertemporal change in EFRU scores would be visible (since the average score in all years would equal 100 by design). Thus all data were normalized with the same absolute mean adjustments as were utilized in the 1992 normalization.²³ The means of these adjusted series therefore differ from 100 when the normalized mean score of an annual series differs from that experienced in 1992, thus allowing the EFRU to capture both intertemporal and interprovincial variation in observed economic freedom.

Table A1
EFRU Rankings by Category, 1990

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	105.5	3	118.4	1	99.0	4	99.0	10
British Columbia	106.8	2	110.1	3	107.0	3	103.4	5
Manitoba	101.6	5	110.0	4	95.1	8	99.4	9
New Brunswick	100.6	9	101.9	9	95.9	7	104.1	3
Newfoundland	101.5	6	93.2	10	98.3	5	113.3	1
Nova Scotia	101.3	7	104.8	8	96.8	6	102.4	6
Ontario	110.7	1	118.4	2	110.0	1	103.8	4
P.E.I.	100.9	8	105.5	6	92.0	9	105.2	2
Quebec	104.7	4	105.4	7	108.2	2	100.7	7
Saskatchewan	98.8	10	107.3	5	89.0	10	100.0	8
Canadian Average	103.3		107.5		99.2		103.1	

Table A2
EFRU Rankings by Category, 1991

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	104.0	3	115.5	1	97.6	5	99.1	10
British Columbia	104.8	2	106.8	3	105.4	2	102.3	6
Manitoba	100.2	7	105.3	5	95.0	8	100.1	8
New Brunswick	99.8	9	98.0	9	95.6	6	105.9	4
Newfoundland	99.9	8	90.3	10	98.3	4	111.0	1
Nova Scotia	100.8	5	101.1	7	95.3	7	106.0	3
Ontario	107.5	1	109.4	2	110.1	1	102.9	5
P.E.I.	100.4	6	102.5	6	90.1	9	108.5	2
Quebec	102.5	4	100.7	8	104.6	3	102.1	7
Saskatchewan	97.9	10	106.1	4	88.2	10	99.5	9
Canadian Average	101.8		103.6		98.0		103.8	

Table A3
EFRU Rankings by Category, 1992

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	101.7	3	110.8	1	100.4	4	93.9	10
British Columbia	104.5	2	104.6	2	107.1	2	101.8	5
Manitoba	98.9	7	102.3	5	96.2	8	98.2	8
New Brunswick	99.9	5	97.7	7	97.9	7	104.1	2
Newfoundland	97.1	9	85.9	10	99.0	5	106.5	1
Nova Scotia	99.3	6	96.9	8	98.6	6	102.4	3
Ontario	106.5	1	103.6	3	115.3	1	100.7	6
P.E.I.	97.6	8	99.7	6	91.0	9	102.0	4
Quebec	100.5	4	96.2	9	106.6	3	98.6	7
Saskatchewan	95.2	10	102.3	4	87.9	10	95.3	9
Canadian Average	100.0		100.0		100.0		100.0	

Table A4
EFRU Rankings by Category, 1993

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	101.0	4	107.3	1	100.1	4	95.6	9
British Columbia	104.2	2	102.9	2	107.5	2	102.3	6
Manitoba	97.1	7	101.2	4	93.7	8	96.4	8
New Brunswick	100.1	5	96.8	7	99.0	5	104.5	4
Newfoundland	96.0	9	84.0	10	98.4	7	105.7	1
Nova Scotia	99.5	6	94.6	9	98.4	6	105.6	2
Ontario	106.2	1	101.6	3	116.0	1	101.0	7
P.E.I.	97.0	8	98.2	6	88.0	9	104.8	3
Quebec	101.8	3	95.3	8	106.5	3	103.5	5
Saskatchewan	93.7	10	100.9	5	87.8	10	92.5	10
Canadian Average	99.7		98.3		99.5		101.2	

Table A5
EFRU Rankings by Category, 1994

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	100.2	4	108.8	1	98.2	4	93.6	10
British Columbia	103.2	2	102.9	2	107.1	3	99.7	6
Manitoba	97.3	7	101.8	3	94.3	8	95.9	9
New Brunswick	98.1	6	96.2	8	97.4	7	100.8	4
Newfoundland	95.6	9	83.6	10	97.6	5	105.5	2
Nova Scotia	96.7	8	95.2	9	97.5	6	97.4	7
Ontario	106.6	1	101.5	4	117.9	1	100.4	5
P.E.I.	98.2	5	99.1	6	88.4	9	107.1	1
Quebec	102.3	3	96.4	7	108.3	2	102.4	3
Saskatchewan	94.9	10	100.9	5	87.4	10	96.3	8
Canadian Average	99.3		98.6		99.4		99.9	

Table A6
EFRU Rankings by Category, 1995

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	99.4	5	110.4	1	95.3	6	92.4	10
British Columbia	104.5	2	103.5	3	109.2	2	100.8	4
Manitoba	98.1	6	104.1	2	92.5	8	97.8	8
New Brunswick	98.1	7	98.3	7	96.7	5	99.2	6
Newfoundland	95.9	9	84.0	10	97.0	4	106.6	2
Nova Scotia	96.5	8	96.2	9	95.2	7	98.2	7
Ontario	106.1	1	102.7	4	115.9	1	99.7	5
P.E.I.	100.5	4	101.2	6	89.1	9	111.1	1
Quebec	102.2	3	97.3	8	106.9	3	102.4	3
Saskatchewan	94.6	10	102.2	5	85.9	10	95.8	9
Canadian Average	99.6		100.0		98.4		100.4	

Table A7
EFRU Rankings by Category, 1996

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	99.4	5	111.6	1	95.6	5	91.1	10
British Columbia	104.4	2	102.5	4	111.8	2	99.1	5
Manitoba	97.6	7	104.0	2	93.2	8	95.4	8
New Brunswick	98.2	6	97.9	7	95.8	4	101.0	4
Newfoundland	94.0	9	84.3	10	94.7	6	103.0	2
Nova Scotia	95.4	8	95.2	9	93.9	7	97.1	7
Ontario	105.7	1	102.6	3	115.3	1	99.0	6
P.E.I.	101.3	4	102.3	5	91.4	9	110.1	1
Quebec	101.6	3	96.8	8	105.5	3	102.5	3
Saskatchewan	93.4	10	101.1	6	86.0	10	93.1	9
Canadian Average	99.1		99.8		98.3		99.1	

Table A8
EFRU Rankings by Category, 1997

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	98.0	6	113.6	1	95.9	5	84.4	10
British Columbia	102.9	2	101.8	6	111.1	2	95.8	5
Manitoba	96.9	7	107.5	2	92.1	8	91.3	8
New Brunswick	98.8	4	99.6	7	96.7	4	100.0	3
Newfoundland	94.9	8	87.0	10	94.2	7	103.5	1
Nova Scotia	94.9	9	97.2	9	94.3	6	93.1	7
Ontario	104.2	1	104.5	4	113.7	1	94.4	6
P.E.I.	98.2	5	104.4	5	90.8	9	99.2	4
Quebec	101.8	3	99.0	8	106.0	3	100.3	2
Saskatchewan	94.0	10	105.2	3	88.1	10	88.6	9
Canadian Average	98.4		102.0		98.3		95.0	

Table A9
EFRU Rankings by Category, 1998

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	99.5	4	117.9	1	97.2	4	83.4	10
British Columbia	104.4	2	103.5	6	112.5	2	97.1	4
Manitoba	98.8	7	111.7	2	93.0	8	91.7	9
New Brunswick	99.2	5	101.9	7	96.9	5	98.8	3
Newfoundland	95.2	10	90.4	10	94.1	7	101.2	1
Nova Scotia	96.5	9	100.6	9	95.1	6	93.7	6
Ontario	105.3	1	108.7	3	114.3	1	93.0	8
P.E.I.	98.9	6	105.1	5	92.5	9	99.0	2
Quebec	101.9	3	101.6	8	108.5	3	95.7	5
Saskatchewan	96.7	8	108.3	4	88.2	10	93.7	7
Canadian Average	99.6		105.0		99.2		94.7	

Table A10
EFRU Rankings by Category, 1999

	Total Score	Overall Rank	Employment		Earnings		Equality/Security	
			Score	Rank	Score	Rank	Score	Rank
Alberta	102.6	3	120.5	1	100.7	4	86.5	10
British Columbia	105.0	2	104.8	7	113.1	2	97.3	5
Manitoba	100.1	5	113.8	2	94.5	7	92.1	9
New Brunswick	100.1	6	105.2	6	96.3	5	98.8	2
Newfoundland	96.4	10	93.4	10	93.0	8	102.9	1
Nova Scotia	97.2	9	103.4	9	95.3	6	92.8	8
Ontario	105.9	1	111.2	3	113.4	1	93.2	7
P.E.I.	98.9	7	107.1	5	91.6	9	98.1	3
Quebec	102.1	4	103.5	8	107.5	3	95.4	6
Saskatchewan	98.5	8	109.0	4	89.0	10	97.6	4
Canadian Average	100.7		107.2		99.4		95.5	

Table B1

Raw Labour Market Data by Province, 1990

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	46.6	56.0	55.7	52.8	58.0	65.4	62.7	62.2	67.3	61.1
Part-Time Employment Rate	(% Employment)	12.4	16.9	17.1	15.9	15.4	17.0	20.3	22.0	17.2	18.0
Self-Employment Rate	(% Employment)	12.1	18.9	13.0	11.9	13.1	12.2	16.6	25.2	17.5	15.7
Precarious Employment Index	(% Employment)	75.5	64.2	69.9	72.2	71.5	70.9	63.1	52.8	65.3	66.3
Duration of Unemployment	(Weeks)	21.3	14.1	16.3	16.7	20.4	13.7	17.5	16.5	14.3	16.1
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$509	\$452	\$485	\$486	\$542	\$557	\$491	\$472	\$540	\$554
Labour Share of GDP	(% Provincial GDP)	56.6	57.1	57.7	54.1	55.4	55.7	52.4	45.2	49.2	53.9
Real Minimum Wage	(\$1992 per Hour)	\$4.56	\$4.88	\$4.81	\$5.09	\$5.79	\$5.71	\$5.01	\$5.31	\$4.83	\$5.41
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	5.5	6.9	6.8	6.2	6.6	7.0	6.6	7.2	8.1	7.4
Female-Male Earnings Ratio*	(%)	70.8	76.2	66.2	62.3	62.4	67.4	65.6	72.9	66.3	63.6
Hourly-Salaried Earnings Ratio	(%)	76.4	66.2	77.7	80.5	80.1	77.1	76.5	72.4	73.3	82.9
Family Poverty Rate*	(%)	10.1	6.9	10.0	10.0	12.2	7.8	13.1	11.8	12.4	10.4
Real per Cap. Program Spending	(\$1992 per Capita)	\$9,418	\$9,549	\$8,747	\$9,251	\$9,153	\$8,325	\$8,561	\$8,608	\$10,628	\$8,896
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,573	\$11,675	\$11,478	\$9,301	\$10,419	\$13,763	\$10,716	\$12,111	\$10,987	\$11,936
Quit Rate	(% Labour Force)	12.4	10.7	10.6	11.9	8.5	9.2	8.9	8.8	10.1	10.6
Union Penetration Rate	(% Employment)	47.5	24.7	27.1	31.0	34.5	27.2	30.4	24.7	22.8	32.2

*Laqqed one year

Table B2

Raw Labour Market Data by Province, 1991

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	45.5	53.9	54.1	51.4	56.0	62.1	60.9	62.4	66.6	60.5
Part-Time Employment Rate	(% Employment)	13.6	18.1	18.3	16.5	16.8	18.2	22.1	22.8	17.6	19.4
Self-Employment Rate	(% Employment)	13.0	19.1	12.6	12.4	13.6	13.0	17.4	25.5	17.1	16.5
Precarious Employment Index	(% Employment)	73.4	62.8	69.1	71.0	69.6	68.8	60.5	51.7	65.3	64.0
Duration of Unemployment	(Weeks)	21.6	14.1	17.7	18.5	22.2	18.5	19.2	17.0	15.9	17.7
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$502	\$433	\$478	\$481	\$526	\$560	\$484	\$468	\$538	\$546
Labour Share of GDP	(% Provincial GDP)	57.4	58.6	58.5	56.2	56.4	57.3	53.1	44.8	49.1	55.9
Real Minimum Wage	(\$1992 per Hour)	\$4.68	\$4.73	\$4.59	\$4.84	\$5.46	\$5.56	\$5.02	\$5.05	\$4.57	\$5.13
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	5.8	6.1	6.1	6.0	6.9	6.9	6.7	7.3	7.4	7.6
Female-Male Earnings Ratio*	(%)	73.0	80.0	72.1	65.8	68.5	66.0	72.5	75.4	67.0	66.8
Hourly-Salaried Earnings Ratio	(%)	76.3	66.1	76.3	79.9	79.7	76.5	75.3	70.5	71.6	81.0
Family Poverty Rate*	(%)	11.9	6.6	8.4	10.2	13.8	8.7	14.2	12.4	10.9	11.7
Real per Cap. Program Spending	(\$1992 per Capita)	\$9,468	\$9,512	\$8,525	\$9,290	\$9,301	\$8,489	\$8,573	\$8,979	\$10,443	\$9,041
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,556	\$11,772	\$11,398	\$9,158	\$11,105	\$15,426	\$10,589	\$11,768	\$10,483	\$12,064
Quit Rate	(% Labour Force)	11.2	11.1	10.7	11.8	8.3	9.4	8.1	9.0	9.7	10.2
Union Penetration Rate	(% Employment)	45.4	24.9	27.5	31.3	35.4	27.8	31.1	24.9	23.0	32.8

*Laqqed one year

Table B3

Raw Labour Market Data by Province, 1992

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	43.0	54.0	52.2	51.8	54.7	60.3	59.7	61.1	65.2	60.0
Part-Time Employment Rate	(% Employment)	14.7	17.6	19.0	16.6	17.1	18.4	22.7	23.5	18.8	19.7
Self-Employment Rate	(% Employment)	12.9	19.4	12.8	12.1	13.7	13.5	17.5	25.8	18.2	16.7
Precarious Employment Index	(% Employment)	72.4	63.0	68.2	71.4	69.2	68.1	59.9	50.7	63.0	63.7
Duration of Unemployment	(Weeks)	23.0	15.4	19.4	18.8	26.0	23.3	20.5	18.9	17.7	18.7
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$509	\$444	\$490	\$492	\$535	\$577	\$489	\$470	\$544	\$546
Labour Share of GDP	(% Provincial GDP)	56.8	57.4	57.8	56.6	56.8	58.2	54.8	46.8	51.6	56.5
Real Minimum Wage	(\$1992 per Hour)	\$4.75	\$4.75	\$5.00	\$5.00	\$5.59	\$6.06	\$5.00	\$5.03	\$4.88	\$5.46
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.4	6.9	6.1	6.1	7.1	7.1	6.6	7.2	7.7	7.4
Female-Male Earnings Ratio*	(%)	73.4	80.8	65.8	66.1	70.1	69.8	74.7	69.4	64.5	70.2
Hourly-Salaried Earnings Ratio	(%)	75.1	64.0	76.5	79.7	79.6	75.1	75.0	71.4	71.5	80.2
Family Poverty Rate*	(%)	11.7	8.5	10.1	10.0	15.1	10.1	17.6	13.2	12.9	11.5
Real per Cap. Program Spending	(\$1992 per Capita)	\$9,199	\$9,278	\$8,333	\$9,131	\$9,186	\$8,765	\$8,550	\$8,587	\$10,081	\$9,259
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,687	\$11,681	\$11,264	\$8,956	\$10,164	\$15,809	\$10,415	\$11,331	\$11,005	\$11,825
Quit Rate	(% Labour Force)	10.0	10.2	10.5	10.4	8.0	8.6	8.4	9.0	9.1	9.4
Union Penetration Rate	(% Employment)	46.3	24.6	28.2	31.4	35.9	27.4	30.5	25.0	22.5	32.7

*Laqqed one year

Table B4

Raw Labour Market Data by Province, 1993

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	42.5	53.4	51.2	51.9	54.1	60.3	60.6	61.5	64.6	59.9
Part-Time Employment Rate	(% Employment)	15.4	19.3	19.1	17.1	17.5	19.2	22.1	23.4	19.6	19.8
Self-Employment Rate	(% Employment)	13.9	19.4	13.7	12.4	14.0	14.2	17.7	25.7	19.1	17.5
Precarious Employment Index	(% Employment)	70.7	61.3	67.2	70.5	68.5	66.6	60.2	50.8	61.3	62.6
Duration of Unemployment	(Weeks)	26.6	16.2	20.9	19.9	27.8	26.9	23.8	20.6	20.5	20.1
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$518	\$446	\$488	\$496	\$535	\$579	\$481	\$460	\$546	\$539
Labour Share of GDP	(% Provincial GDP)	54.3	52.9	56.3	56.9	55.7	57.1	53.2	47.5	50.6	56.2
Real Minimum Wage	(\$1992 per Hour)	\$4.67	\$4.66	\$5.09	\$4.94	\$5.66	\$6.24	\$4.87	\$5.19	\$4.94	\$5.68
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.5	6.2	7.0	6.4	6.7	7.3	7.4	7.9	8.4	7.3
Female-Male Earnings Ratio*	(%)	69.7	80.1	89.9	70.2	73.9	71.9	70.2	70.6	70.3	70.0
Hourly-Salaried Earnings Ratio	(%)	77.1	65.6	76.2	79.9	79.9	75.0	75.0	71.1	72.6	79.7
Family Poverty Rate*	(%)	14.6	7.3	10.5	10.0	13.3	10.2	15.4	13.7	16.4	12.3
Real per Cap. Program Spending	(\$1992 per Capita)	\$9,448	\$9,621	\$8,593	\$9,327	\$9,425	\$8,964	\$8,740	\$8,545	\$10,474	\$9,268
Real Social Assistance Benefits*	(\$1998 per Family)	\$12,161	\$11,859	\$11,260	\$9,018	\$11,537	\$16,091	\$11,531	\$11,198	\$10,973	\$12,351
Quit Rate	(% Labour Force)	10.2	10.0	9.9	10.5	7.9	8.0	8.1	7.8	9.0	9.6
Union Penetration Rate	(% Employment)	44.7	24.3	27.7	30.1	35.5	26.7	29.9	24.9	22.0	31.8

*Laqqed one year

Table B5 Raw Labour Market Data by Province, 1994

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	42.7	54.2	52.4	51.7	54.9	60.1	60.5	61.3	65.6	60.4
Part-Time Employment Rate	(% Employment)	14.7	17.7	19.7	16.8	16.9	18.6	21.4	22.2	19.5	21.2
Self-Employment Rate	(% Employment)	14.3	18.8	13.2	12.0	13.3	14.2	17.0	24.9	19.0	17.5
Precarious Employment Index	(% Employment)	71.1	63.6	67.1	71.2	69.8	67.2	61.5	52.9	61.5	61.3
Duration of Unemployment	(Weeks)	29.0	16.7	21.8	21.0	28.8	27.5	22.8	20.9	19.7	20.1
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$518	\$446	\$484	\$492	\$547	\$594	\$481	\$465	\$540	\$548
Labour Share of GDP	(% Provincial GDP)	53.4	51.7	56.1	55.5	55.2	56.4	53.6	44.0	48.8	54.7
Real Minimum Wage	(\$1992 per Hour)	\$4.62	\$4.67	\$5.03	\$4.91	\$5.89	\$6.58	\$4.80	\$5.10	\$4.87	\$5.69
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.7	5.9	6.6	6.4	6.6	7.0	7.1	6.7	8.1	8.1
Female-Male Earnings Ratio*	(%)	62.6	74.6	59.0	55.1	65.6	65.4	64.4	65.7	59.9	61.2
Hourly-Salaried Earnings Ratio	(%)	79.9	66.3	75.4	79.3	80.0	75.7	75.5	72.8	73.0	80.1
Family Poverty Rate*	(%)	13.0	5.0	12.3	10.3	15.5	11.5	14.9	13.0	14.1	13.1
Real per Cap. Program Spending	(\$1992 per Capita)	\$8,979	\$9,300	\$8,275	\$9,008	\$9,118	\$8,508	\$8,222	\$8,006	\$9,741	\$8,920
Real Social Assistance Benefits*	(\$1998 per Family)	\$12,017	\$11,792	\$11,063	\$9,048	\$12,019	\$16,070	\$10,347	\$11,077	\$10,538	\$12,397
Quit Rate	(% Labour Force)	11.0	10.4	10.0	11.4	8.0	8.4	8.3	8.9	9.0	9.8
Union Penetration Rate	(% Employment)	45.6	27.3	27.7	30.9	34.0	26.6	30.1	24.6	20.7	37.6

*Laqqed one year

Table B6 Raw Labour Market Data by Province, 1995

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	43.4	56.0	52.6	52.5	55.2	60.0	61.3	61.4	66.4	59.8
Part-Time Employment Rate	(% Employment)	16.1	17.6	19.9	16.8	17.1	18.5	20.9	22.5	19.5	20.3
Self-Employment Rate	(% Employment)	13.6	18.0	13.9	12.4	14.3	14.0	16.3	24.4	20.4	17.2
Precarious Employment Index	(% Employment)	70.3	64.4	66.3	70.8	68.7	67.5	62.8	53.1	60.1	62.5
Duration of Unemployment	(Weeks)	32.0	16.9	20.3	18.9	27.7	25.8	21.5	19.1	18.1	18.9
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$513	\$452	\$471	\$493	\$540	\$585	\$473	\$461	\$528	\$551
Labour Share of GDP	(% Provincial GDP)	53.4	52.2	55.3	54.5	53.6	54.1	52.0	42.9	46.6	53.9
Real Minimum Wage	(\$1992 per Hour)	\$4.55	\$4.60	\$4.96	\$4.84	\$5.89	\$6.57	\$4.80	\$5.00	\$4.76	\$6.06
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.2	5.7	7.3	6.8	6.8	7.0	6.7	6.6	7.3	7.5
Female-Male Earnings Ratio*	(%)	68.7	77.5	72.4	63.9	70.0	69.6	73.7	69.3	68.9	69.5
Hourly-Salaried Earnings Ratio	(%)	79.0	74.4	75.4	78.2	80.0	75.4	74.5	72.3	71.5	79.9
Family Poverty Rate*	(%)	14.0	6.4	12.6	11.8	15.3	10.2	13.9	12.0	12.9	13.5
Real per Cap. Program Spending	(\$1992 per Capita)	\$9,024	\$9,212	\$8,020	\$8,898	\$9,223	\$8,416	\$8,047	\$7,891	\$8,862	\$8,786
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,994	\$11,566	\$11,218	\$9,419	\$12,277	\$16,079	\$10,262	\$11,056	\$9,789	\$12,701
Quit Rate	(% Labour Force)	9.6	10.2	10.1	10.3	7.7	7.5	7.9	9.0	8.4	8.7
Union Penetration Rate	(% Employment)	44.3	24.7	26.1	30.7	33.6	26.9	30.6	26.2	20.3	32.0

*Laqqed one year

Table B7
Raw Labour Market Data by Province, 1996

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	42.0	56.6	52.4	52.1	54.8	60.0	61.5	61.3	67.1	59.7
Part-Time Employment Rate	(% Employment)	16.4	17.7	19.9	16.9	17.5	18.8	20.8	21.2	19.0	20.4
Self-Employment Rate	(% Employment)	12.9	17.3	14.8	13.3	14.8	14.3	16.3	24.6	19.9	17.8
Precarious Employment Index	(% Employment)	70.7	65.0	65.3	69.8	67.7	66.9	62.9	54.2	61.1	61.8
Duration of Unemployment	(Weeks)	30.2	16.6	22.1	19.2	27.5	24.8	21.2	20.2	16.5	19.7
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$502	\$467	\$468	\$488	\$536	\$591	\$472	\$467	\$538	\$558
Labour Share of GDP	(% Provincial GDP)	52.3	53.5	54.4	52.8	52.8	53.0	52.0	41.5	45.5	53.9
Real Minimum Wage	(\$1992 per Hour)	\$4.48	\$4.52	\$4.88	\$5.00	\$5.80	\$6.47	\$4.95	\$4.93	\$4.66	\$6.43
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.7	6.1	6.8	6.2	6.9	7.1	6.4	7.0	6.9	7.5
Female-Male Earnings Ratio*	(%)	67.1	77.3	71.5	65.3	74.8	73.7	70.4	71.7	70.3	73.2
Hourly-Salaried Earnings Ratio	(%)	80.9	79.9	76.3	79.9	80.1	76.3	74.6	71.5	72.1	79.1
Family Poverty Rate*	(%)	15.7	7.6	13.4	11.9	15.8	11.6	13.4	12.4	13.8	13.1
Real per Cap. Program Spending	(\$1992 per Capita)	\$8,602	\$8,511	\$7,743	\$8,565	\$8,739	\$8,025	\$7,650	\$7,515	\$8,089	\$8,243
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,735	\$11,008	\$11,004	\$9,874	\$12,012	\$14,907	\$10,041	\$10,817	\$9,578	\$12,466
Quit Rate	(% Labour Force)	10.3	10.2	9.7	10.3	7.7	7.4	7.6	8.9	8.1	8.9
Union Penetration Rate	(% Employment)	40.6	24.0	25.8	28.1	34.2	25.8	30.5	26.8	20.4	30.8

*Laqqed one year

Table B8
Raw Labour Market Data by Province, 1997

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	42.6	56.4	52.9	52.4	55.0	60.3	62.5	62.4	67.5	59.3
Part-Time Employment Rate	(% Employment)	16.6	17.0	20.5	16.7	17.5	18.8	19.9	20.9	18.9	21.2
Self-Employment Rate	(% Employment)	13.3	17.0	15.3	14.3	14.9	15.7	17.6	24.7	20.9	19.7
Precarious Employment Index	(% Employment)	70.1	65.9	64.2	69.0	67.6	65.5	62.5	54.4	60.3	59.1
Duration of Unemployment	(Weeks)	27.7	14.5	20.4	17.6	25.8	22.5	17.6	16.3	14.4	20.5
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$487	\$446	\$465	\$489	\$539	\$592	\$470	\$478	\$548	\$560
Labour Share of GDP	(% Provincial GDP)	52.0	54.9	53.8	52.7	53.0	52.6	50.7	39.1	44.2	54.1
Real Minimum Wage	(\$1992 per Hour)	\$4.74	\$4.67	\$5.07	\$5.14	\$5.91	\$6.35	\$4.84	\$5.08	\$4.57	\$6.38
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	6.7	7.0	7.8	6.7	7.3	7.6	7.4	7.9	8.1	8.5
Female-Male Earnings Ratio*	(%)	72.2	76.8	72.5	68.8	75.7	73.7	74.9	70.0	67.5	73.8
Hourly-Salaried Earnings Ratio	(%)	79.9	73.4	78.3	80.7	81.3	76.5	75.1	73.8	73.8	79.6
Family Poverty Rate*	(%)	14.2	10.0	13.5	10.7	17.9	12.2	16.1	12.3	13.7	14.5
Real per Cap. Program Spending	(\$1992 per Capita)	\$8,194	\$8,202	\$7,237	\$8,360	\$8,117	\$7,412	\$7,180	\$7,133	\$7,595	\$7,893
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,544	\$10,498	\$10,824	\$9,812	\$11,816	\$12,239	\$9,877	\$10,641	\$9,421	\$12,263
Quit Rate	(% Labour Force)	10.2	9.2	8.6	10.3	6.8	6.9	6.3	7.5	7.5	7.7
Union Penetration Rate	(% Employment)	34.8	23.3	25.1	25.3	34.4	24.5	30.1	26.7	20.4	29.8

*Laqqed one year

Table B9 Raw Labour Market Data by Province, 1998

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	44.4	56.8	54.1	53.5	55.7	61.5	63.3	62.7	68.1	59.0
Part-Time Employment Rate	(% Employment)	16.2	17.7	19.5	16.0	17.4	18.2	19.3	20.2	19.3	21.7
Self-Employment Rate	(% Employment)	14.7	19.0	15.0	13.7	15.3	15.4	17.1	25.6	20.1	20.9
Precarious Employment Index	(% Employment)	69.1	63.3	65.6	70.3	67.3	66.4	63.6	54.2	60.6	57.4
Duration of Unemployment	(Weeks)	23.8	14.0	19.3	18.5	24.9	19.8	14.6	13.9	11.6	18.1
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$488	\$454	\$470	\$489	\$537	\$594	\$479	\$482	\$556	\$562
Labour Share of GDP	(% Provincial GDP)	50.9	52.4	53.9	53.2	53.0	53.0	51.3	41.5	45.8	54.4
Real Minimum Wage	(\$1992 per Hour)	\$4.84	\$5.09	\$5.07	\$5.12	\$6.42	\$6.29	\$4.78	\$5.01	\$4.61	\$6.46
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	7.2	7.0	7.5	7.0	8.3	7.9	7.1	7.4	9.0	8.1
Female-Male Earnings Ratio*	(%)	70.5	80.2	71.0	69.8	74.7	73.1	73.3	73.3	64.2	72.9
Hourly-Salaried Earnings Ratio	(%)	78.1	71.7	78.5	80.7	79.0	76.9	75.9	75.6	75.9	79.8
Family Poverty Rate*	(%)	13.3	8.6	13.9	11.4	18.2	11.3	15.8	10.8	13.3	13.3
Real per Cap. Program Spending	(\$1992 per Capita)	\$8,621	\$8,233	\$7,354	\$8,148	\$8,244	\$7,301	\$7,335	\$7,175	\$7,786	\$7,813
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,440	\$10,042	\$10,634	\$9,909	\$11,169	\$12,046	\$9,703	\$10,454	\$9,333	\$11,997
Quit Rate	(% Labour Force)	9.8	9.5	8.2	9.4	6.6	6.4	6.2	8.0	7.8	8.1
Union Penetration Rate	(% Employment)	33.3	23.1	26.0	24.7	33.2	24.1	28.9	26.5	20.4	28.6

*Laqqed one year

Table B10 Raw Labour Market Data by Province, 1999

		Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC
Employment Variables											
Employment Rate	(% Working Age Pop.)	46.9	57.4	55.2	55.3	56.6	62.5	64.2	62.6	68.1	59.8
Part-Time Employment Rate	(% Employment)	15.6	17.0	19.2	16.3	16.8	18.0	19.7	20.6	19.4	21.6
Self-Employment Rate	(% Employment)	13.1	19.1	14.7	13.1	15.3	15.8	17.5	25.1	19.6	20.6
Precarious Employment Index	(% Employment)	71.4	63.9	66.1	70.6	67.9	66.2	62.8	54.3	61.1	57.8
Duration of Unemployment	(Weeks)	21.3	13.3	16.2	15.8	22.1	18.3	14.7	15.1	11.3	19.5
Earnings Variables											
Real Weekly Earnings	(\$1992 per Week)	\$494	\$448	\$470	\$486	\$529	\$586	\$472	\$477	\$548	\$562
Labour Share of GDP	(% Provincial GDP)	49.1	52.8	54.4	53.2	52.8	53.3	52.7	43.8	50.0	54.9
Real Minimum Wage	(\$1992 per Hour)	\$4.83	\$5.03	\$5.01	\$5.04	\$6.39	\$6.17	\$5.08	\$5.28	\$4.98	\$6.43
Equality & Security Variables											
Top-to-Bottom Quintile Ratio*	(Ratio After-tax Inc.)	7.2	6.7	8.6	6.9	7.9	8.4	7.6	7.3	10.2	8.0
Female-Male Earnings Ratio*	(%)	74.3	73.7	72.3	70.6	72.7	72.3	73.4	76.5	68.5	73.6
Hourly-Salaried Earnings Ratio	(%)	78.6	72.8	79.3	81.1	78.2	79.1	77.1	77.7	80.3	78.7
Family Poverty Rate*	(%)	13.7	7.4	13.8	10.5	16.4	10.1	14.1	9.7	11.9	11.1
Real per Cap. Program Spending	(\$1992 per Capita)	\$8,462	\$8,653	\$7,519	\$8,274	\$8,398	\$7,326	\$7,431	\$7,527	\$7,810	\$7,863
Real Social Assistance Benefits*	(\$1998 per Family)	\$11,436	\$9,669	\$10,382	\$9,924	\$10,823	\$11,659	\$9,333	\$9,288	\$9,184	\$11,611
Quit Rate	(% Labour Force)	9.4	9.3	8.1	9.0	6.2	6.4	6.6	7.9	7.6	7.4
Union Penetration Rate	(% Employment)	34.8	23.8	25.6	24.2	33.5	23.6	30.5	26.3	20.4	28.1

*Laqqed one year

Notes

- ¹ In this context, the contrast between so-called economic freedoms and traditional politically-rooted conceptions of freedom is often striking. The Fraser Institute's economic freedom project was explicitly motivated by a frustration that traditional conceptions of democracy downgraded the importance of private economic rights; see Michael Walker, "The historical development of the economic freedom index," in James Gwartney, Robert Lawson and Walter Block, eds., *Economic Freedom of the World 1975-1995* (Vancouver: Fraser Institute, 1996). Thanks to this approach, countries in which the guarantee of basic democratic rights is questionable at best (such as Thailand, Bolivia, or Guatemala) can nevertheless rank highly in terms of "economic freedom." See Murray Dobbin, *The Myth of the Good Corporate Citizen* (Ottawa: Canadian Centre for Policy Alternatives, 1998) for a more detailed critique of the anti-democratic bent of the economic freedom meter.
- ² See James Gwartney, Robert Lawson and Walter Block, eds., *Economic Freedom of the World 1975-1995* (Vancouver: Fraser Institute, 1996), and subsequent editions.
- ³ From "Introduction" in *Economic Freedom of the World 2000*, by James Gwartney, Robert Lawson and Dexter Samida (Vancouver: Fraser Institute, 2000).
- ⁴ The United Nations ranking is reported in *Human Development Report 2000* (Geneva: United Nations Development Program).
- ⁵ Modern free trade treaties, for example, typically include more text detailing the new regulatory powers of governments to hunt down and prosecute intellectual property violators, than describing the elimination of tariffs and other unwanted regulatory powers. It is not clear at all that government is getting smaller or less intrusive, even as economic "freedom" (in the realm of international trade) is being consolidated.
- ⁶ See *Provincial Economic Freedom in Canada, 1981-98*, by Faisal Arman, Dexter Samida and Michael Walker (Vancouver: Fraser Institute, 1999).
- ⁷ Advocates of a more business-friendly approach to measuring economic freedom will object, "But the owners of businesses work, too—probably harder than most employees do." This is true, and since the statistical data on employment and incomes below include the self-employed, the work effort of business owners will be reflected within the present study. Their income and status which comes purely from owning property, however, will not.
- ⁸ The EFRU index is thus comparable in its empirical complexity to the Fraser Institute's interprovincial freedom index, which includes 11 components.
- ⁹ This is not the place to review the long-standing debate over whether minimum wages increase unemployment; suffice it to report that most modern economic analysis of this question has found a negligible or even positive impact of minimum wages on low-wage employment. For

a summary of recent evidence, see David Card and Alan B. Krueger, *Myth and Measurement: The New Economics of the Minimum Wage* (Princeton: Princeton University Press, 1995); for a Canadian discussion, see Errol Black and Lisa Shaw, *The Case for a Strong Minimum Wage Policy* (Ottawa: Canadian Centre for Policy Alternatives, 1998).

- 10 For example, the Fraser Institute global freedom index includes a measure of the “freedom to enter and compete in markets,” varying between 0 and 10, which is constructed on the basis of a subjective evaluation of the regulatory policies of different countries. Several other component series are similarly and subjectively constructed.
- 11 See, for notable Canadian examples, Lars Osberg and Andrew Sharpe, “An index of economic well-being for Canada,” Centre for the Study of Living Standards, May 1998; David Cosby, “A genuine progress indicator for Canada: an alternative to growth as a measure of progress,” in Bruce Campbell and John Loxley, eds., *The Alternative Federal Budget Papers 1997* (Ottawa: Canadian Centre for Policy Alternatives, 1997); and “Measuring well-being: proceedings from a symposium on social indicators,” Canadian Council on Social Development, November 1996.
- 12 As explained in the appendix, many equality and security variables are lagged one year in the EFRU calculations, so the sub-index reflects changes in social policy with a partial delay.
- 13 In this aspect the EFRU methodology, which relies centrally on observed economic outcomes and less on political interpretation and judgement, contrasts with the Fraser Institute’s approach, in which there is a more predictable link between the politics of a provincial government and its standing in the rankings.
- 14 Even the Fraser Institute verifies this finding by virtue of Canada’s consistently high rankings in its global economic freedom index. Of course, at any point in time the Fraser Institute would always prefer policy to be more *laissez faire* than it is. But even by their standards Canada possesses one of the most deregulated, business-oriented economies in the world.
- 15 The Canada-wide average in each case is an unweighted mean of the ten provincial scores.
- 16 This approach requires that some of the raw data entering the EFRU index calculation be inverted so that a higher absolute value indicates more freedom; the inverted series are identified in the detailed description below.
- 17 Without this additional normalization, series which exhibited a larger degree of interprovincial variation in relative arithmetic terms (such as, for example, the average duration of unemployment) would effectively carry more than their assigned weight in the final index, while those with relatively less relative variation (such as the measure of income distribution) would carry less influence than intended. The normaliza-

tion of standard deviations ensures that the adjusted values for all series will approximately vary across provinces between 90 and 110.

- ¹⁸ To be sure, many Canadians work part-time or are self-employed by choice; moreover, since some Canadians will be both part-time workers and self-employed, the index of underemployment as presently constructed will involve a limited degree of double-counting. Nevertheless, since there is widespread agreement that the significant rise in both part-time employment and self-employment in recent years largely reflects sustained weakness in the paid labour market (further evidenced by the decline in both part-time employment and self-employment since Canadian labour markets began to strengthen in 1998), this index still serves as a useful proxy for the level of precariousness in employment relationships.
- ¹⁹ It would be preferable, of course, to focus on particular types of program spending which are considered to be most important in underpinning living standards (presumably including important programs such as health care and education, while excluding line items such as military spending and HRDC jobs grants). The availability of comparable and timely data across jurisdictions, however, prohibits this more targeted approach; a task for future research into quality of life indicators would be to improve the accuracy of this measure. Since no provincial breakdown of federal program spending is available on a consistent basis, a simple Canada-wide average of federal spending is used in each province.
- ²⁰ For lagged series, 1989 data were used in the calculation of EFRU scores for 1990.
- ²¹ An additional series, family social assistance benefits, is also dependent on nominal price levels, but the comparative data utilized for this variable (published by the National Council on Welfare) were already deflated (to 1998 dollar terms).
- ²² Since the data on program spending per capita were lagged one year, the relevant deflator in this case is the lagged provincial CPI.
- ²³ Specifically, the original scores were multiplied by the sample mean of the corresponding series for 1992 (for inverted series, the ratio of the adjustment is reversed).

